

WHITE PAPER

# Cutting costs down to size with dimensioning



For decades, dimensioning has had a small niche in logistics and material handling. Now it's getting new attention as an opportunity for savings across the industry. Here's why:

### Carrier rates are now based on parcel size

Shippers who aren't dimensioning every parcel have no way to predict, control or audit their shipping costs. Their margins are literally at the mercy of their carrier.

### The need for efficiency has never been greater

The explosion of e-commerce – and subsequent competitive pressure within the space – has squeezed margins, made warehouse space more valuable, shortened fulfillment windows, and ratcheted up the need to find efficiencies wherever possible.

### New technologies make dimensioning doable

The days of clunky, inaccurate dimensioning machinery are over. Dimensioning technology is undergoing a rapid evolution, and a new generation of hardware and software solutions are making it simpler to dimension your entire warehouse or parcel stream.

It's worth noting that volume, not weight, has always been the limiting resource in storage and distribution, but – because scales are cheap and fast – weight has been used as an inexact stand-in. Now that dimensioning equipment is reaching new levels of efficiency, volume can be managed directly and accurately, bringing savings to warehouses, DCs, and logistics operators.

Let's count the ways.

There is an emerging class of solutions that offer the advantages of a small footprint, but are packed with speed and capabilities older devices could only dream of.



# 1

## Receiving and slotting

A loaded truck backs up to your dock. Where is all of this stuff going to fit? Without dimensioning, you can't know for sure. In fact, many warehouses and DCs run at less than 80% capacity because – without dimensional data – they have no way of accurately predicting space requirements. That translates into lots of unused space that could be earning revenue.

With dimensioning on board, it's a different story. Incoming freight is efficiently measured and shelved – 20%+ more efficiently on average. That's like getting a bigger warehouse.

And a quicker system means you can easily scan inbound shipments to keep your WMS up to date without impacting throughput. It's hard to put a price on the savings that comes from avoiding operational problems due to new packaging, suppliers, or SKUs – some warehouse managers would say it's priceless.

### Your WMS's new best friend

Companies that have paired dimensioning systems with a WMS have reduced unloading times from four hours to 30 minutes, reducing labor costs by about \$100 per employee, per truck. Assuming two workers offload three trucks per week, slotting efficiencies gained from pairing dimensioning equipment with a WMS can result in \$30,000 annual savings.



# Order creation

The benefits of premanifesting are well known – but they include more than warehouse floor efficiencies. Pre-manifesting allows you to mark the order shipped, thereby improving your performance metrics. You can also collect payment immediately, which alerts you to credit cards that are declined before picking even begins. Pre-manifesting can't happen without accurate dimensional data in your Order Management Software (OMS).

## The right money for the right package

One difficulty for e-commerce businesses is correctly estimating shipping costs for orders placed online. It was hard enough with weight alone; dimension-based rates have upped the challenge. In most cases there is no opportunity to recoup mis-estimated charges. Integrating dimensioning data in your system means you can predict final shipping costs with much greater accuracy, and collect the right money for the right package – before it's too late.



---

Dimensioning lets you  
predict shipping costs with  
much greater accuracy,  
and collect the right money  
for the right package –  
before it's too late.

# Pick and pack



Joe Customer places an order. His tolerance for slow delivery: zero. And dropping. Thanks to high performing e-tailers like Amazon, on-time fulfillment is tied to customer retention, with 78% of Americans expecting their orders to be shipped within 24 hours. How can you compete?

## Direct-to-box picking

Dimensioning is the key. A well-chosen dimensioning solution will provide the data your system needs to enable direct-to-box picking. Research estimates that pick-to-box methods reduce pick time by as much as 10%. Imagine the bottom line impact of a 10% increase in your outbound package stream without any additional labor cost. For a company that ships 100 packages a day with an average COGS of \$15/parcel, that would increase revenues by \$150/day, or roughly \$37,500/year. Not bad.

And of course increasing pick rate at the expense of accuracy is not an option. More errors result in re-packing costs, returns, and worst of all, unhappy customers. Once again, dimensioning comes to the rescue. Choose a system that records a photo of each scanned item, and your pick lists can include an image of each item, so your pickers can verify their selections. Warehouses using images on pick lists reported an error reduction from 4% to less than 1%.

---

**Warehouses using images on  
pick lists report an error  
reduction from 4% to under 1%**

Plus, boxes will be automatically optimized for your pickers. That cuts packaging and void fill costs, and of course shipping charges. But the benefits of reducing void space don't stop there.


Research shows that customers are more inclined to buy from companies that reduce excess packaging and void fill. A recent poll revealed that fully 47% of Americans think extra packaging is wasteful. One in five said it's an indication they paid too much for their order – not good for loyalty. Dimensioning makes it possible to satisfy customers, cut pick times, reduce material costs, reduce returns, and shrink your shipping bill all at once.

## Return reduction

Reverse logistics for returns average at about 8% of sales – a big bite. On top of that are labor costs: opening packages, restocking, completing administrative paperwork, and following up with customers.

For a company that sells \$500,000 in product, the annual cost of returns is estimated to be about \$40,000. Combined with increased revenues due to higher pick rates, the reduction in pick errors means your state-of-the-art dimensioning system will pay for itself in weeks, not years. And increase customer satisfaction as a freebie.

## THE SHAPE OF THINGS TO COME



It's essential to find a system that can handle any shape. Otherwise every tube, bag, dented box, or shrinkwrapped item breaks the system and requires special handling – meaning your employee's precious time, a measuring tape, and manual entry. And chances are greater than 30% it will be

mismeasured. The best dimensioners can flawlessly measure anything you throw at them, instantly, with certified accuracy.

Irregular shapes are predicted to top 40% of the parcel stream within two years. Don't invest in a system that can't handle the future.

# Shipping

Three things you can be certain of: Death, taxes, and rising shipping rates. And lately, increased rates are even more of a sure thing as major carriers switch to dimension-based pricing, and use the surrounding confusion as an opportunity for significant hikes.

The trickle that began in 2007, when UPS and FedEx went to dimensional pricing for packages over three cubic feet, has become a torrent. Now the two leading carriers use dimensional pricing for every package over one cubic foot, periodically raising prices by lowering the dim divisor – a trend that will surely continue. And the USPS is following in their footsteps.

Shippers who aren't dimensioning have no way to predict – let alone control – their shipping costs. Many report that they can only “guesstimate” their spend until the carrier invoices them, a disaster for managing margins. What do to?

## Multicarrier in real time

With dimensioning on your outbound line, you'll know the size of every parcel, as well as its exact cost. Even better, by integrating a multicarrier shipping solution, you'll be able to instantly compare national and regional carrier rates in real time. That equals significant cost savings.



4





# 5

## Billing

Equally important is the ability to – in the words of one prominent DC manager – “keep your carriers honest” by auditing invoices. Honest errors do occur, and they can be costly. ClearView reports that one freight company reports that they recover between 3% and 7% of small parcel spend by identifying errors in their billing. On average, a company that is spending \$100,000 per year will lose about \$5,000 to errors. A company that is spending \$1 million per year loses \$50,000.

Using a system certified for accuracy is essential; your manual measurements – or those of an uncertified system – won’t hold water when you contact your carrier for a refund. Also worth noting: FedEx and UPS now charge a “special handling” fee when companies supply inaccurate package dimensions. A system certified for any shape will avoid those fees and eliminate chargebacks.

## Knowledge is power

Dimensional data gives you another edge, as well: leverage when it’s time to renegotiate carrier contracts. You’ll know exactly how carrier rates compare on your specific parcel stream. Just negotiating for a slightly higher dimweight divisor, for example, can have a significant impact on annual spend.

---

Using a system certified for accuracy is essential. Your manual measurements – or those of an uncertified system – won’t hold water when you contact your carrier for a refund.



# 6


## Next steps

Any one of these benefits would justify the modest investment dimensioning represents. Put them together, though, and it's a slam-dunk. It's no mystery why the industry is quickly migrating to dimension-based management. There is just too much opportunity to leave on the table.

### Get your feet wet

The important thing is to get started. Pick a small-footprint system that doesn't require any buildout. One such system, QubeVu, offers state-of-the-art technology and is even available by lease for less than \$200/month. There couldn't be an easier way to explore the benefits of dimensioning. If you're like many other logistics and warehouse operators, you'll quickly find that it's an indispensable part of your technology arsenal, offering phenomenal opportunities for increasing efficiency and containing costs.

#### THE NEED FOR SPEED



Not every dimensioning system offers the same benefits. It may seem obvious, but faster is better. Not so obvious: There are many different aspects to functional speed. Scan time is critical, of course. But systems that scan quickly but require special alignment, or the operator to intervene, are real productivity killers. The best systems automatically detect and scan items in under a second – no matter the placement or shape.

The difference adds up. A manually-intensive system adds 3 to 15 seconds per scan. Not much, until you do the math. 500 items per day will take hours longer – increasing payroll and causing delays for all dependent processes. Annually, it amounts to more than 500 staff hours. Increase the number of items and the costs climb.

# About QubeVu



QubeVu offers a family of advanced, economical dimensioning solutions. Each one offers the world's fastest dimensioning, certified accuracy on any shape, and class-leading simplicity. No wonder QubeVu is the fastest growing brand.

Here are some of QubeVu's other key benefits:

- Totally automatic scanning with no object alignment needed
- A photo of every item
- Fast setup and class-leading simplicity
- Designed and assembled in the USA

## Just ask Dave Field

Dave Field, co-founder of the Nightline Group, credits QubeVu with helping the business grow. Nightline offers end-to-end logistics across Ireland, with a fleet of 450 vehicles moving about 40 million parcels each year.

"We used to weigh and then measure with measuring tapes. As the business grew, this became totally ineffective. It was costing us a fortune."

Since Nightline introduced QubeVu, the company has dramatically reduced labor costs and increased revenues. Despite a wide variety of parcel shapes and sizes, QubeVu keeps up. "It's actually quite slick, less than half a second per parcel. I'd like to say every package was 10x10x10, but of course they're not. We could have anything from a guitar to television come through here." QubeVu handles it all.



*Sales by:*  
Newcastle Systems, Inc.  
781-935-3450  
[www.newcastlesys.com](http://www.newcastlesys.com)

